

REMARKS

In the office action of September 21, 2006, objection was made to the limitation "the cut-off frequency" in line 10 of claim 1. It was said that there is insufficient antecedent basis for this limitation of the claim. This matter has been corrected raising the phrase "the cut-off frequency" to --a cut-off frequency--.

In the same office action, claims 1-4 and 11 were rejected under 135 U.S.C. § 102(b) as being anticipated by Akiyama et al, U.S. Pat. No. 6,057,659. In the Examiner's comments, the Examiner compared certain features of claim 1 to the disclosure in Akiyama.

The loudspeaker (10) for bass signals in the present application is disclosed as a "sub-woofer" at page 2, fifth paragraph, line 2. The component is known in the art to have a frequency range in the range of 0 Hz - 200 Hz. Thus, it is a feature of the present invention that the crossover frequency is significantly higher than this frequency. It is now specifically recited in claim 1 as about 350 Hz.

In the Akiyama reference, the crossover frequency between the speakers believed to be at 3 Khz and not 350 Hz as mentioned in the office action with respect to claim 2. It is a bass signal amplification network in the Akiyama that supplements the bass circuit for frequencies in a range from 150 Hz to 250 Hz, centered around a frequency of 200 Hz. This is a different technique than in the present invention where the crossover frequency is set significantly higher than 200 Hz, but not nearly as high as 3Khz.

In keeping with the above explanation, the bass loudspeaker has been more particularly defined in the claims as a "sub-woofer" loudspeaker in the claims.

In addition, the present invention distinguishes from Akiyama and the other art in providing a series of partial housings which are connected together. In the office action, the Examiner pointed to the chambers positioned in between the housings for the respective speakers, but now that claim 4 has been amended to recite that the housings are connected by the chambers, this is seen to further distinguish Akiyama from the other art.

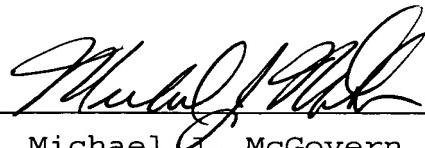
In addition, it is believed that claims 6 and 7 add additional novelty and nonobviousness in providing housings of extremely small size. As disclosed on page 1, the problem in the art was the restricted dimensions of the device in which only the restricted space is available for the loudspeaker arrangement. Therefore, there must be some way to isolate and damp out the vibrations from the subwoofer speaker so as not to affect the operation of the other speakers in the assembly.

The applicant would also like to mention that the application has been granted on a claim similar to the original claim 1 over the cited reference Akiyama in the European Patent Office and has issued as EP 1 529 418 B1.

CONCLUSION

After the amendment, claims 1 and 3-12 are still pending. In view of the amendment and remarks, reconsideration of the application and a Notice of Allowance for the above claims is respectfully requested.

Respectfully submitted,

By:   
Michael J. McGovern  
Quarles & Brady LLP  
411 East Wisconsin Avenue  
Milwaukee, WI 53202-4497  
(414) 277-5725  
Attorney of Record